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09/839803

IM1303USNA

AMENDED APPEAL BRIEF UNDER 37 CFR 41.37

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PATENT**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In the Application of:

ADRIAN LUNGU

CASE NO.: IM1303 US NA

APPLICATION NO.: 09/839,803

GROUP ART UNIT: 1752

FILED: APRIL 20, 2001

EXAMINER: AMANDA C. WALKE

CONFIRMATION NO.: 2560

FOR: A PHOTOPOLYMERIZABLE ELEMENT FOR USE AS A  
FLEXOGRAPHIC PRINTING PLATE**AMENDED APPEAL BRIEF UNDER 37 CFR 41.37**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Notice of Non-Compliant Appeal Brief (37 CFR 41.37) dated November 30, 2006 and communicating that the Appeal Brief filed on 24 September 2006 relating to the above-identified application is defective solely due to Applicant's failure to provide a summary of the claimed subject matter as required by 37 CFR 41.37(c)(1)(v), the following amended summary of claimed subject matter is hereby filed as a replacement section:

**AMENDED SUMMARY OF CLAIMED SUBJECT MATTER**

As described in the specification beginning on page 3 at line 23 and continuing through page 4 at line 24, and recited in Claims 1 and 33, the present invention is a photopolymerizable element for use as a flexographic printing plate comprising a support and a photopolymerizable elastomeric layer on the support. The photopolymerizable layer comprises a binder, at least one monomer, a photoinitiator, an onium salt and a leuco dye. Claim 1 defines a photopolymerizable element wherein the onium salt is present in greater reactive amount than the leuco dye and is selected from the group consisting of phosphonium salts, selenonium salts, triarylselenonium salts, iodonium salts, diaryliodonium salts, sulfonium salts, triarylsulphonium salts,

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dialkylphenacylsulphonium salts, triarylsulphoxonium salts, aryloxydiarylsulphoxonium salts, dialkylphenacylsulphoxonium salts, and combinations thereof. In use, the photopolymerizable layer is imagewise exposed to actinic radiation forming polymerized and unpolymerized portions in the layer, and also backflash exposed through the support to actinic radiation to form a floor. The imagewise exposed layer is then treated to remove the unpolymerized portions and form a relief surface having raised areas that contrast in color with the floor.

In particular, the specification on page 3, at lines 23 through 26, describes a photopolymerizable element for use as a flexographic printing plate that forms an image having contrasting color in an exposed area than in an unexposed area upon imagewise exposure to actinic radiation. The specification on page 3, at lines 31 through 33, describes a photopolymerizable element for use as a flexographic printing plate comprising a support and a photopolymerizable layer on the support, as recited in independent Claims 1 and 33. The specification on page 3, at lines 33 and 34, describes the photopolymerizable layer comprising an elastomeric binder, at least one monomer, a photoinitiator, an onium salt and a leuco dye, as recited in Claims 1 and 33. The specification on page 4, at lines 6 through 10, describe a photopolymerizable printing element having a photopolymerizable layer that includes an onium salt and a leuco dye which together photoinduce contrast and effectively differentiate exposed areas relative to unexposed (or underexposed) areas in an image, as recited in Claim 33. The specification on page 4, at lines 10 through 13, describes that, upon exposure to actinic radiation, the onium salt and the leuco dye react causing a change in color in the exposed areas compared to the unexposed areas and thus provide color contrast to the image, as recited in Claim 33. The specification on page 4, at lines 13 through 15, states that the image color contrast between the exposed areas and the unexposed areas in the element is retained prior to treating to form a relief for the plate. The specification on page 4, at lines 15 through 20, describes that the image contrast in color is also retained between the raised (exposed) areas of the relief and a floor of the plate after treating and throughout subsequent exposure steps, such as post-exposure and light finishing, and that the color contrast of the image in the element is useful during the steps of forming the relief plate from the element as well as for mounting of the plate onto printing cylinders. The specification on page 4, at lines 20 through 24, describes the photosensitive element of the present invention used for preparing flexographic printing plates as comprising a support and at least one photopolymerizable layer, wherein the photopolymerizable layer is an elastomeric layer that includes a thermoplastic binder, at least one monomer, a photoinitiator, the onium salt, and the leuco dye, as recited in Claims 1 and 33.

The specification on page 8, at lines 26 through 31, describes onium salts suitable for use including phosphonium salts, selenonium salts, triarylselenonium salts, iodonium salts,

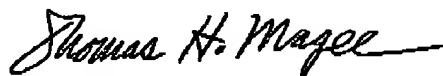
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diaryliodonium salts, sulfonium salts, triarylsulphonium salts, dialkylphenacylsulphonium salts, triarylsulphoxonium salts, aryloxydiarylsulphoxonium salts, dialkylphenacylsulphoxonium salts, and combinations thereof, as recited in Claim 1. The specification on page 9, at lines 8 through 12, also describes the onium salt as being present in the photopolymerizable composition in greater effective amount than the effective amount of the leuco dye, as recited in Claim 1, so that the leuco dye is completely reacted or substantially completely reacted with the onium salt during the main imagewise exposure of the element. As further explained in the specification on page 9, at lines 12 through 14, after the main exposure, no or substantially no leuco dye is available to react with the excess onium salt. Thus, any further change in color contrast should not occur when the element is post-exposed. (The backflash exposure is typically much shorter than the main exposure, and thus sufficient exposure energy is not reached to induce the color change.) Also, as shown in the Example beginning on page 25 at line 21 through page 26 at line 15 of the specification, a photopolymerizable element having the leuco dye in greater amount than the onium salt, created color contrast after main exposure, but lost its color contrast after final post exposure/finishing. Therefore, in order for the photopolymerizable element to retain color contrast in the resulting printing element, the onium salt must be in greater reactive amount than the leuco dye.

Respectfully submitted,



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